SOIL CONSERVATION SERVICE
MARYLAND
CONSERVATION PRACTICE STANDARD

ACCESS ROAD

CODE 560
(Reported by Ft.)

DEFINITION

A travelway constructed as part of a conservation plan.

PURPOSE

To provide a fixed route of travel for moving livestock, produce, equipment, and supplies; and to provide access for proper operation, maintenance, and management of conservation enterprises while controlling runoff to prevent erosion and maintain or improve water quality.

CONDITIONS WHERE PRACTICE APPLIES

Where access is needed between cropland, woodland, and farm buildings and where this existing travel is causing excessive erosion and where a new road is being planned to allow access on the farm, without creating environmental problems.

Access road may include the improvement of existing intrafarm road where both realignment and resurfacing may be needed.

This standard does not apply to access roads used for the purpose of providing access from public roads and highways to farm headquarters.

CONSIDERATIONS

Access roads shall be designed to serve the enterprise or planned use with the expected vehicular or equipment traffic. The type of vehicle or equipment, speed, loads, climatic, and other conditions under which vehicles and equipment are expected to operate need to be considered.

Visual resources and environmental values shall be considered in planning and designing the road system.

Water Quantity - The following items should be considered for water quantity:

1. Effects on downstream flows or aquifers that would affect other water uses or users.

2. Effects on the volume of and timing of downstream flow to prohibit undesirable environmental, social, or economic effects.

Water Quality - The following items should be considered for water quality:

1. Short-term and construction-related effects of this practice on the quality of on-site downstream water courses.

2. Overall effects on erosion and the movement of sediment, pathogens, and soluble and sediment-attached substances that would be carried by runoff.

3. Effects on wetlands and water-related wildlife habitats that would be associated with the practice.

CRITERIA

General

Access roads planned for woodland harvest operations shall conform to any additional requirements necessary for that type of operation.

Sound engineering practices shall be followed to ensure that the road meets the requirements of its intended use and that maintenance requirements are minimal.

Location

Roads shall be located to serve the purpose intended, to facilitate the control and conveyance of water, to control or reduce erosion and to make the best use of topographic features. The roads should generally follow natural contours and slopes to minimize disturbance of drainage patterns. Roads should be located where they can be maintained and potential water management and pollution problems are not created.

Width

The minimum width of the roadbed shall be ten (10) feet. A greater width may be needed to meet machinery needs especially on curves and turnouts.

The minimum shoulder width should be two (2) feet on each side of the roadbed, and may be either gravel or grass.

Alignment

Grades normally should not exceed 10 percent, except for lengths less than 100 feet, but maximum grades of 20 percent may be used if necessary. For grades over 15 percent, special consideration shall be given to surface treatment and water control.

Side Slopes

All cuts and fills shall have side slopes of 2:1 or flatter. In small, short lengths, steeper slopes will be permitted, if soil conditions warrant and special stabilization measures are approved.

Drainage

The type of drainage structure used will depend on the runoff conditions. Culverts or grade dips for water management shall be provided at all natural drainage ways.

The access road cross section shall be graded to provide positive drainage from the road surface. Where access roads cross existing streams, the conservation practice standard for stream crossing shall apply.

Roadside ditches shall be adequate to provide surface drainage capacity for the roadway. Channels shall be designed to be on stable grades or protected with structures or linings for stability. Roadside ditches and channels shall be maintained.

Water breaks or bars may be used to control surface runoff on low-intensity use roads.

Surfacing

Access roads shall be given a wearing course or surface treatment if required by traffic needs, climate, erosion control, or dust control. The type of treatment depends on local conditions, available materials, and the existing road base. If these factors or the volume of traffic is not a problem, no special treatment of the surface is required.

Erosion Control

If soil and climatic conditions are favorable, roadbanks and disturbed areas shall be vegetated as soon as possible. If the use of vegetation is precluded and protection against erosion is needed, protection shall be provided by nonvegetative materials, such as gravel or other mulches.

Roadside channels, cross drains, and drainage structure inlets and outlets shall be designed to be stable without protection. If protection is needed, riprap or other similar materials shall be used.

When constructing an access road, three phases of erosion control must be considered: (1) during construction; (2) final vegetative treatment; and (3) maintenance during the life of the practice.

PLANS AND SPECIFICATIONS

The work shall consist of construction of the access road at the location, and to the sections and grades shown on the drawings, and as staked in the field.

Foundation Preparation

All trees, brush, stumps, and other obstructions will be removed from the construction area and disposed of in a specified disposal area in a manner that will not cause pollution to ground or surface water.

Earth Fill

Borrow - All fill material shall be the type indicated on the drawings, and shall be obtained from borrow areas noted on the plans. Fill shall contain no frozen material, sod, limbs, roots, rubbish, or other objectionable material. Stones larger than 4" shall not be used as fill.

Placement and Compaction - Fill shall be placed and spread in lifts of 6 inches or less in thickness and compacted by routing the hauling and spreading equipment in such a manner that the entire surface of each lift is traversed by at least one tread track of the equipment. The fill material shall be moist, not dry or saturated.

Structures

All structures, including culverts, box inlets or subsurface drains, should be durable material, and shall be installed to the grades and elevations shown on the drawings.

Vegetation

All disturbed areas shall be stabilized in accordance with conservation practice standard Critical Area Planting (342). Any special protection materials shall be installed per manufacturer's instructions.

OPERATION AND MAINTENANCE

An operation and maintenance plan will be developed and provided and shown on the drawings. As a minimum, these measures will be carried out for the life of the practice:

1. Inspect culverts and roadside ditches after each major runoff event.

2. Maintain grass areas in adequate cover. Reseed and mow as needed.

3. Fill low areas in travel treads and regrade, as needed, to maintain road cross section.

SUPPORTING DATA AND DOCUMENTATION

Field Data and Survey Notes

Record on SCS-ENG-28-29, and/or other appropriate paper.

1. ROAD GRADE FOR EACH DESIGN REACH (hand level or abney level survey allowed for grades ≥2 %)

2. CROSS SECTIONS - One per design reach

3. SUFFICIENT INFORMATION to determine the need for any drainage structures.

Design Data

Record on Appropriate SCS forms.

1. Complete landowner data and location sketch.

2. Record design grades, elevations and cross section dimensions for each design reach.

3. Record construction notes, construction specifications, construction sequence, MISS UTILITY statement and materials list.

4. Record complete permanent seeding and maintenance requirements**.**

Construction Check Data

Record on SCS-ENG-28-29, and plot in "red" on drawings.

1. Constructed grade of road per design reach.

2. Constructed grade and elevations of drainage structures.

3. Cross sections per design reach for road and drainage structures.

4. Constructed length and width.

5. Statement about road surface material and permanent seeding.

6. Sign and date notes including statement that the practice meets or exceeds plans and specifications.

REFERENCES

1. Engineering Field Manual, USDA, Soil Conservation Service.

2. National Handbook of Conservation Practices, USDA, Soil Conservation Service.

3. Technical Release No.55, Urban Hydrology for Small Watersheds, USDA, Soil Conservation Service, 1986.

4. Technical Release No.77, Design and Installation of Flexible Conduits, USDA, Soil Conservation Service, 1990.

5. Handbook of Steel Drainage and Highway Construction Products, Third Edition, American Iron and Steel Institute, Washington, D.C., 1983

6. Standard Specification for Construction Materials, Maryland Department of Transportation, State Highway Administration, Baltimore, Maryland, 1988.

7. Soil Erosion and Sediment Control Guidelines for Forest Harvest Operations in Maryland, MDE, Baltimore, Maryland.